

AMENDMENTS

In the Claims:

1. (Currently Amended) A controller of an electrical machine having a rotor and at least one electrically energisable phase winding, the controller ~~configured to apply a single predetermined angle correction factor to a portion of a predetermined advance angle profile covering a range of different rotor speeds comprising a memory storing a predetermined advance angle profile and a predetermined angle correction factor distinct from the predetermined advance angle profile~~, wherein the predetermined advance angle profile represents energisation of the phase winding with respect to angular position of the rotor over a range of rotor speeds, ~~and the controller is configured to apply the predetermined angle correction factor to a portion of the predetermined advance angle profile that covers a range of different rotor speeds.~~

2. (Previously Presented) A controller as claimed in claim 1, wherein the predetermined advance angle profile includes on-advance angle data for the range of different rotor speeds.

3. (Previously Presented) A controller as claimed in claim 2, wherein the controller is configured to apply the predetermined angle correction factor to the on-advance angle data.

4. (Previously Presented) A controller as claimed in claim 1, wherein the predetermined advance angle profile includes off-advance angle data for the range of different rotor speeds.

5. (Previously Presented) A controller as claimed in claim 4, wherein the controller is configured to apply the predetermined angle correction factor to the off-advance angle data.

6-7. (Canceled).

8. (Currently Amended) A method of controlling an electrical machine having a rotor, ~~[[and]] at least one electrically energisable phase winding, comprising providing a control map comprising a predetermined advance angle profile and a predetermined angle correction factor to and a controller as claimed in claim 1, 2 or 4 one of claims 1-5, for the electrical machine, storing the control map in a memory in the controller and using the controller to control the electrical machine based on the stored control map comprising applying the predetermined angle~~

correction factor to a portion of the predetermined advance angle profile that covers a range of different rotor speeds.

9. (Currently Amended) A method of generating a control map for a controller of a machine having a rotor and at least one electrically energisable phase winding, the method comprising:

producing an advance angle profile representing energisation of the phase winding with respect to the angular position of the rotor over a range of rotor speeds;

energising the winding in accordance with the advance angle profile;

measuring input power to the machine; [[and]]

producing ~~a single an~~ angle correction factor, distinct from the advance angle profile, for a portion of the advance angle profile ~~covering that covers~~ a range of different rotor speeds, wherein the angle correction factor depends on a difference between the measured input power and a predetermined input power, and

storing the advance angle profile and the angle correction factor in a memory associated with the controller.

10. (Previously Presented) A method as claimed in claim 9, wherein the winding is energised in accordance with the advance angle profile at a single predetermined speed, which speed is associated with the predetermined input power.

11. (Previously Presented) A method as claimed in claim 10, wherein the step of producing the angle correction factor includes applying predetermined incremental changes to the advance angle profile, measuring the input power after each incremental change and comparing the measured input power with the predetermined input power.

12. (Previously Presented) A method as claimed in claim 10 or 11, wherein the angle correction factor comprises a change in angle required to reduce a difference between the measured input power and the predetermined input power to within predetermined limits.

13. (Canceled)

14. (Previously Presented) A method as claimed in claim 9, 10 or 11, further comprising transmitting the angle correction factor to the controller by means of radio frequency signals.

15. (Previously Presented) A method as claimed in claim 9, 10 or 11, wherein an input voltage applied to the phase winding is substantially constant.

16. (Previously Presented) A computer readable medium having a computer program stored thereon for controlling a machine in accordance with the method as claimed in claim 9, 10 or 11.

17. (Canceled).

18. (Currently Amended) An electrical machine incorporating a controller as claimed claim 1, 2 or 4 in one of claims 1-5.

19. (Previously Presented) An electrical machine as claimed in claim 18 comprising a switched reluctance motor.

20. (Previously Presented) A cleaning appliance incorporating an electrical machine as claimed in claim 18.

21-27. (Canceled).

28. (Previously Presented) A controller as claimed in claim 1, wherein the controller is configured to apply the predetermined angle correction factor to an on-advance angle of the rotor and an off-advance angle of the rotor.

29. (Currently Amended) A method as claimed in claim [[9]] 8, further comprising applying wherein the predetermined angle correction factor is applied to an on-advance angle of the rotor and an off-advance angle of the rotor.

30-31. (Canceled)